

# SERVICE MANUAL

STEREO GRAPHIC EQUALIZER  
CONSOLETTTE

**SANSUI RG-707**  
(Silver & Black Model)



## • SPECIFICATIONS

Input sensitivity and impedance (1 kHz)

SOURCE IN, TAPE PLAY

..... 150 mV/47 kilohms

MIC ..... 0.5 mV/10 kilohms

GUITAR ..... 7 mV/100 kilohms

Output level (1 kHz)

TAPE REC ..... 150 mV/47 kilohms

MIXING OUT ..... 150 mV/47 kilohms

Total harmonic distortion (1 kHz, 2V)

SOURCE IN ..... 0.05 %

Frequency response (0.5 V)

SOURCE IN ..... 20 Hz ~ 20 kHz, +1 dB, -2 dB

Signal to noise ratio (Short-circuit, A-network)

SOURCE IN ..... 70 dB

Channel separation (1 kHz)

SOURCE IN ..... 50 dB

Echo time ..... 0 ~ 3 sec.

Delay time ..... 50 msec.

Power requirements ..... 120/220/240 V (50/60 Hz)

For U.S.A. and Canada

..... 120 V (60 Hz)

Power consumption ..... 15 W

Dimensions ..... 430 mm (16-15/16") W

78 mm (3-1/8") H

223 mm (8-13/16") D

Weight ..... 2.8 kg (6.2 lbs) net

3.4 kg (7.5 lbs) packed

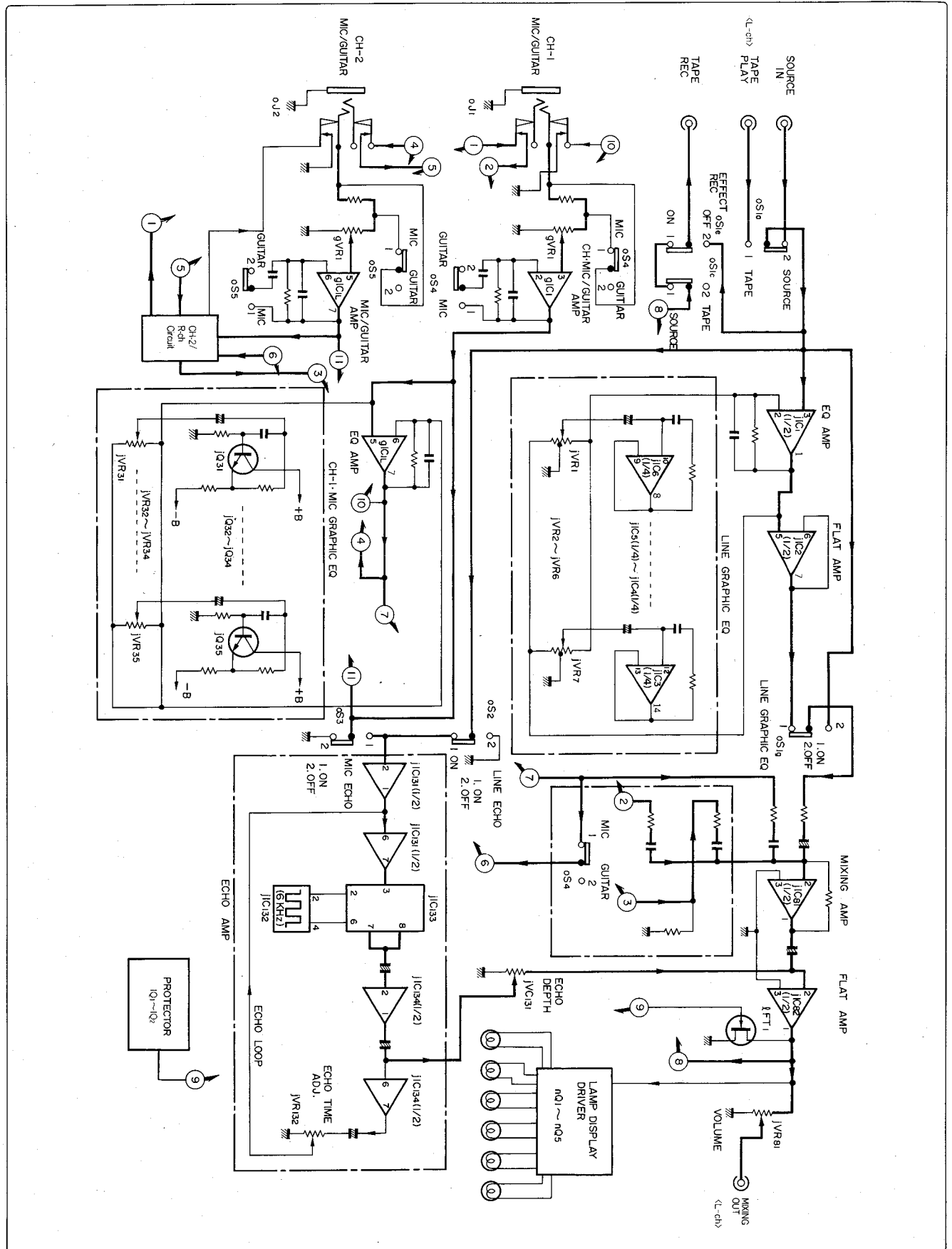
\* Design and specifications subject to change without notice for improvements.

**Sansui**

SANSUI ELECTRIC CO., LTD.

# 1. BLOCK DIAGRAM

## 1-1. Main Circuit

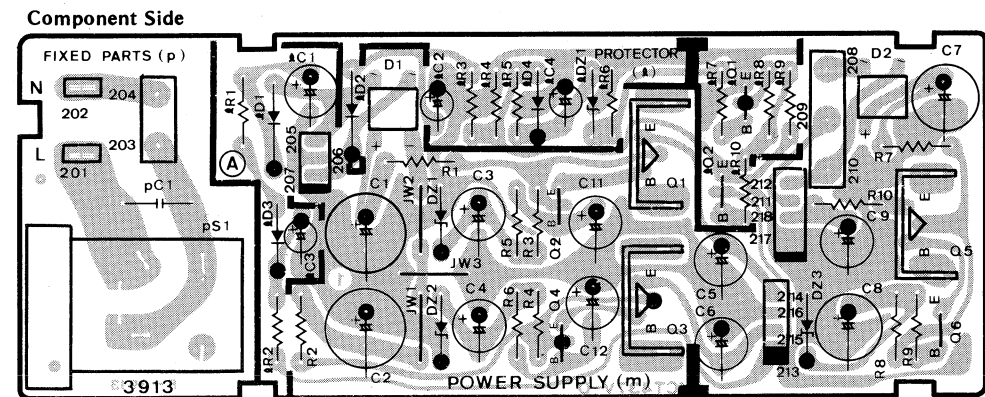


Parts List &lt;F-3914&gt;

Parts No.	Stock No.	Description
jC33	46424800	0.47 $\mu$ F 50V E.C.
jC34	46424600	0.22 $\mu$ F 50V E.C.
jC35	46424400	0.1 $\mu$ F 50V E.C.
jC36	07216600	47000pF 25V C.C.
jC37	07216200	22000pF 25V C.C.
jC38	07215800	10000pF 25V C.C.
jC39	07216200	22000pF 25V C.C.
jC40	07215900	12000pF 25V C.C.
jC41	07215600	6800pF 25V C.C.
jC42	07215300	3900pF 25V C.C.
jC43	07214900	1800pF 25V C.C.
jC44	07211700	1000pF 25V C.C.
jC82	07216600	47000pF 25V C.C.
jC83	07216600	47000pF 25V C.C.
jC85	07216600	47000pF 25V C.C.
jC88	07216600	47000pF 25V C.C.
jC131	07216600	47000pF 25V C.C.
jC132	07216600	47000pF 25V C.C.
jC133	07216600	47000pF 25V C.C.
jC134	07216600	47000pF 25V C.C.
jC135	46137000	150pF 50V C.C.
jC137	07214800	1500pF 25V C.C.
jC138	07215300	3900pF 25V C.C.
jC139	07211700	1000pF 25V C.C.
jC143	07215000	2200pF 25V C.C.
jC145	07215300	3900pF 25V C.C.
jC146	07216000	15000pF 25V C.C.
jC147	46137600	470pF 50V C.C.
jC148	07216800	68000pF 25V C.C.
jC150	07215300	3900pF 25V C.C.
jC151	07215000	2200pF 25V C.C.
jC153	07216300	27000pF 25V C.C.
jC155	07216600	47000pF 25V C.C.
jC156	07216300	27000pF 25V C.C.
jVR132	07241600	100k $\Omega$ (B) S.V.R., ECHO TIME Adj.
•FET		
IFT1	03703400	2SK163-K1
	or 03703401	2SK163-K2
	or 03703402	2SK163-L1
	or 03703403	2SK163-L2
	or 03703000	2SK117-O
	or 03703001	2SK117-Y
	or 46421100	2SK246-Y
	or 46421101	2SK246-GR

Parts No.	Stock No.	Description
•Zener Diode		
mDZ4	46114600	05Z15-Z
mR10	46227800	10 $\Omega$ 1/2W N.I.R.
mR11	46230200	1k $\Omega$ 1/2W N.I.R.
•Transistor		
nQ1	07194801	2SC1815
	or 46367301	2SC2458
nQ2	07194801	2SC1815
	or 46367301	2SC2458
nQ3	07194801	2SC1815
	or 46367301	2SC2458
nQ4	07194801	2SC1815
	or 46367301	2SC2458
nQ5	07194801	2SC1815
•IC		
nIC1	03607700	NJM4558D
•Diode		
nD1	03117600	1S2473
nD2	03117600	1S2473
nC7	07215800	10000pF 25V C.C.
nC8	07211700	1000pF 25V C.C.
nC9	07215800	10000pF 25V C.C.
oS4	46501800	Push SW., MIC/GUITAR
oS5	46501800	Push SW., MIC/GUITAR
oJ1	24306200	Jack, CH-1 MIC
oJ2	25306200	Jack, CH-2 MIC
oZ1	46371500	4P Terminal Board, LINE
oZ2	46371500	4P Terminal Board, TAPE

## 3-3. F-3913 Power Supply Circuit Board (Stock No. 00722701)



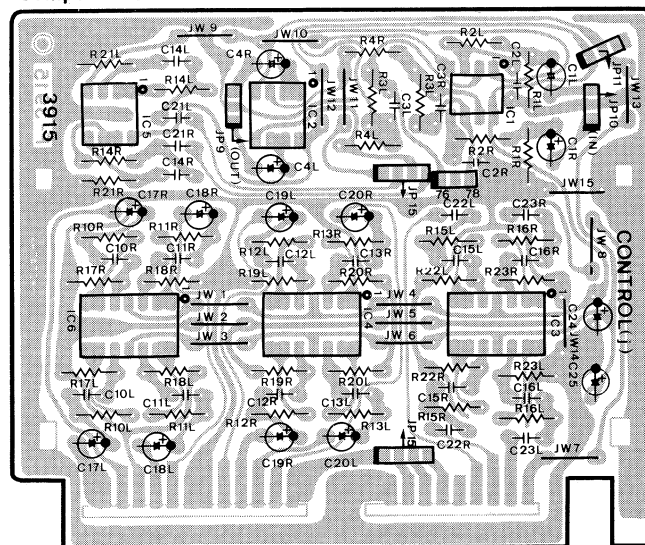
Parts List

Parts No.	Stock No.	Description	Parts No.	Stock No.	Description
•Transistor			•Diode		
IQ1	07194701	2SA1015	mD1	46273600	DBB10-B
	or 46367201	2SA1048	mD2	46273600	DBB10-B
IQ2	07194801	2SC1815	•Zener Diode		
	or 46367301	2SC2458	mDZ1	46114600	05Z15-Z
•Diode				or 03179200	RD15E-B
ID1	03117700	10E-2	mDZ2	46114600	05Z15-Z
ID2	03117700	10E-2		or 03179200	RD15E-B
ID3	03117600	1S2473	mDZ3	46116000	05Z24-Y
ID4	03117600	1S2473	mR1	46227800	10 $\Omega$ 1/2W N.I.R.
•Zener Diode			mR2	46227800	10 $\Omega$ 1/2W N.I.R.
IDZ1	46111800	05Z6.2-Y	mR7	46227800	10 $\Omega$ 1/2W N.I.R.
IR1	46229400	220 $\Omega$ 1/2W N.I.R.	pC1	46425800	10000pF 400V C.C.
•Transistor			pS1	07265300	Push SW., POWER
mQ1	03083901	2SD313			
mQ2	07194801	2SC1815			
mQ3	03032301	2SB507			
mQ4	07194701	2SA1015			
mQ5	03083901	2SD313			
mQ6	07194801	2SC1815			

• Note: The circuit boards, F-3910, F-3911, F-3912, F-3916, F-3917, F-3918 & F-3919 are not supplied as the assembled. However, the individual parts on the circuit boards are provided by orders.

## 3-2. F-3915 LINE GRAPHIC EQUALIZER Circuit Board (Stock No. 00722901)

Component Side

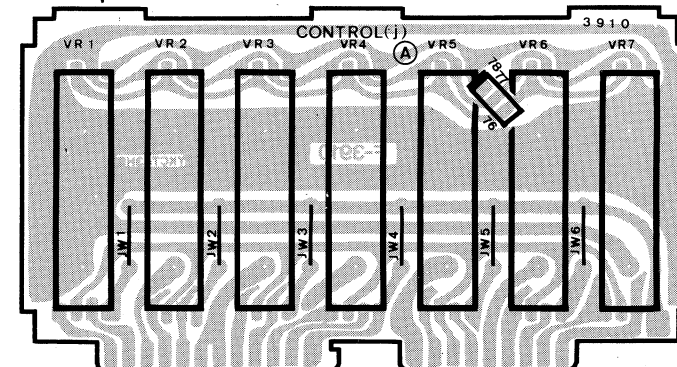


Parts List

Parts No.	Stock No.	Description
•IC		
jIC1	03607700	NJM4558D
jIC2	46500800	NJM2058
jIC3	46500800	NJM2058
jIC4	46500800	NJM2058
jIC5	03607700	NJM4558D
jIC6	03607700	NJM4558D
jC10	07216600	47000pF 25V C.C.
jC11	07216200	22000pF 25V C.C.
jC12	07215600	6800pF 25V C.C.
jC13	07215100	2700pF 25V C.C.
jC14	07211700	1000pF 25V C.C.
jC15	46137600	470pF 50V C.C.
jC16	46137200	220pF 50V C.C.
jC21	07216500	39000pF 25V C.C.
jC22	07216000	15000pF 25V C.C.
jC23	07215400	4700pF 25V C.C.

## 3-4. F-3910 LINE GRAPHIC EQUALIZER Volume Circuit Board

Component Side

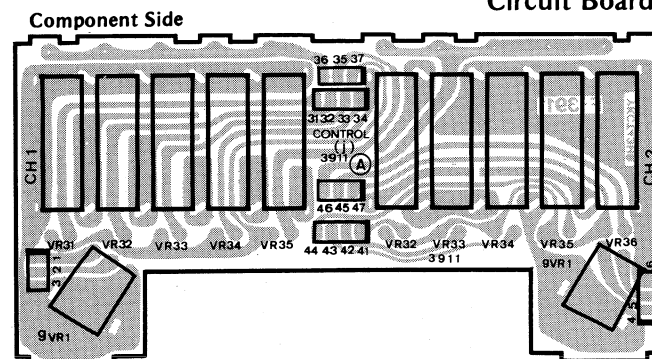


Parts List

Parts No.	Stock No.	Description	Parts No.	Stock No.	Description
jVR1	46500600	250k $\Omega$ x 2 Slide V.R., 63Hz	jVR5	46500600	250k $\Omega$ x 2 Slide V.R., 2.5kHz
jVR2	46500600	250k $\Omega$ x 2 Slide V.R., 160Hz	jVR6	46500600	250k $\Omega$ x 2 Slide V.R., 6kHz
jVR3	46500600	250k $\Omega$ x 2 Slide V.R., 400Hz	jVR7	46500600	250k $\Omega$ x 2 Slide V.R., 16kHz
jVR4	46500600	250k $\Omega$ x 2 Slide V.R., 1kHz			



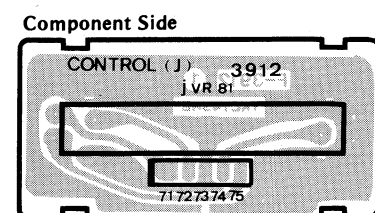
### 3-5. F-3911 MIC GRAPHIC EQUALIZER Volume Circuit Board



#### Parts List

Parts No.	Stock No.	Description
gVR1	46500200	10kΩ (A) V.R., MIC LEVEL
jVR31	46500500	50kΩ (B) Slide V.R., 150Hz
jVR32	46500500	50kΩ (B) Slide V.R., 300Hz
jVR33	46500500	50kΩ (B) Slide V.R., 600Hz
jVR34	46500500	50kΩ (B) Slide V.R., 1.2kHz
jVR35	46500500	50kΩ (B) Slide V.R., 2.4kHz
jVR36	46500500	50kΩ (B) Slide V.R., 4.8kHz

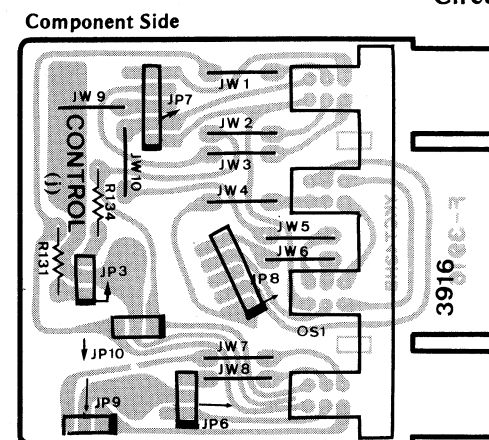
### 3-6. F-3912 VOLUME Circuit Board



#### Parts List

Parts No.	Stock No.	Description
jVR81	46500300	10kΩ (A) Slide V.R., VOLUME

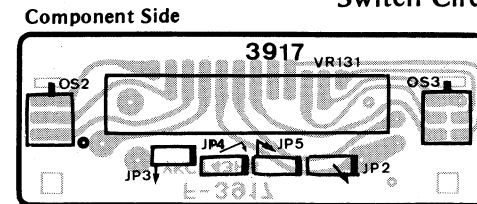
### 3-7. F-3916 LINE INPUT · EFFECT REC Switch Circuit Board



#### Parts List

Parts No.	Stock No.	Description
oS1	46500100	Push SW., LINE INPUT · EFFECT REC · LINE EQ

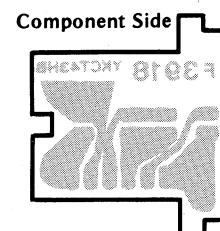
### 3-8. F-3917 ECHO DEPTH Volume · MIC ECHO Switch Circuit Board



#### Parts List

Parts No.	Stock No.	Description
jVR131	46500400	20kΩ (B) Slide V.R., ECHO DEPTH
oS2	46500000	Push SW., LINE ECHO
oS3	46500000	Push SW., MIC ECHO

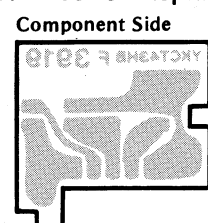
### 3-9. F-3918 Display Lamp (R-ch) Circuit Board



#### Parts List

Parts No.	Stock No.	Description
nPL1	46359900	Pilot Lamp 100mA 8V
nPL2	46359900	Pilot Lamp 100mA 8V
nPL3	46359900	Pilot Lamp 100mA 8V

### 3-10. F-3919 Display Lamp (L-ch) Circuit Board



#### Parts List

Parts No.	Stock No.	Description
nPL4	46359900	Pilot Lamp 100mA 8V
nPL5	46359900	Pilot Lamp 100mA 8V
nPL6	46359900	Pilot Lamp 100mA 8V

#### • Abbreviations

C.R. : Carbon Resistor	E.B. : Bi-Polar Electrolytic Capacitor
S.R. : Solid Resistor	E.B.L. : Low Leak Bi-Polar Electrolytic Capacitor
Ce.R. : Cement Resistor	Ta.C. : Tantalum Capacitor
M.R. : Metal Film Resistor	F.C. : Film Capacitor
F.R. : Fusing Resistor	M.P. : Metalized Paper Capacitor
N.I.R. : Non-Inflammable Resistor	P.C. : Polystyrene Capacitor
C.C. : Ceramic Capacitor	G.C. : Gimmic Capacitor
C.T. : Ceramic Capacitor, Temperature Compensation	V.R. : Variable Resistor
E.C. : Electrolytic Capacitor	S.V.R. : Semi Variable Resistor
E.L. : Low Leak Electrolytic Capacitor	SW. : Switch

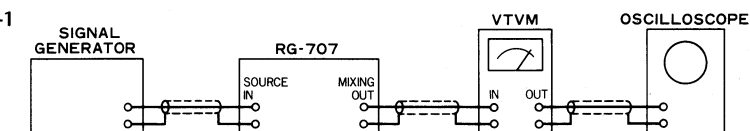
## 4. ECHO LEVEL ADJUSTMENT (See Top View on Page 7)

SETTING: 1) Connect the measurement units as Fig. 4-1.

2) Set the control knobs as follows.

LINE INPUT	.....	SOURCE	EFFECT REC	.....	OFF
LINE EQ	.....	OFF	LINE ECHO	.....	ON
ECHO DEPTH	.....	Max.	MIC ECHO	.....	OFF
VOLUME	.....	Max.			

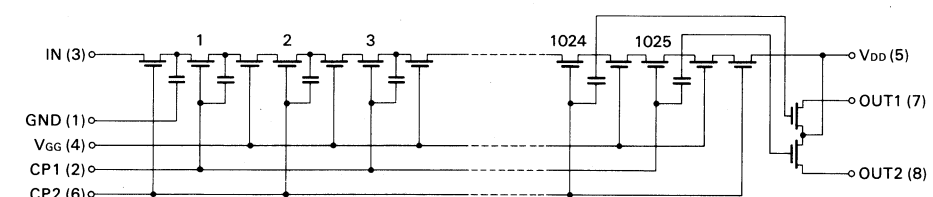
Fig. 4-1



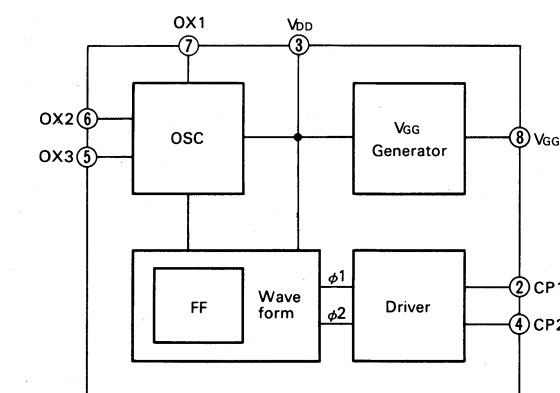
INPUT SIGNAL	MEASURE OUTPUT	STEP	ADJUSTMENT
800 Hz 1.5V SG SOURCE IN	MIXING OUT VTVM, Scope	1	Turn the semi-variable resistor jVR132 (F-3914) fully clockwise.
		2	Push LINE INPUT switch to be TAPE.
		3	Confirm that the reverberation circuit starts to oscillate, and its wave form comes out from MIXING OUT.
		4	Turn jVR132 slowly counterclockwise until the oscillation stops.

## 5. INTERIOR BLOCK DIAGRAM OF IC

### • MN3007 <Bucket Brigade Device (BBD)>

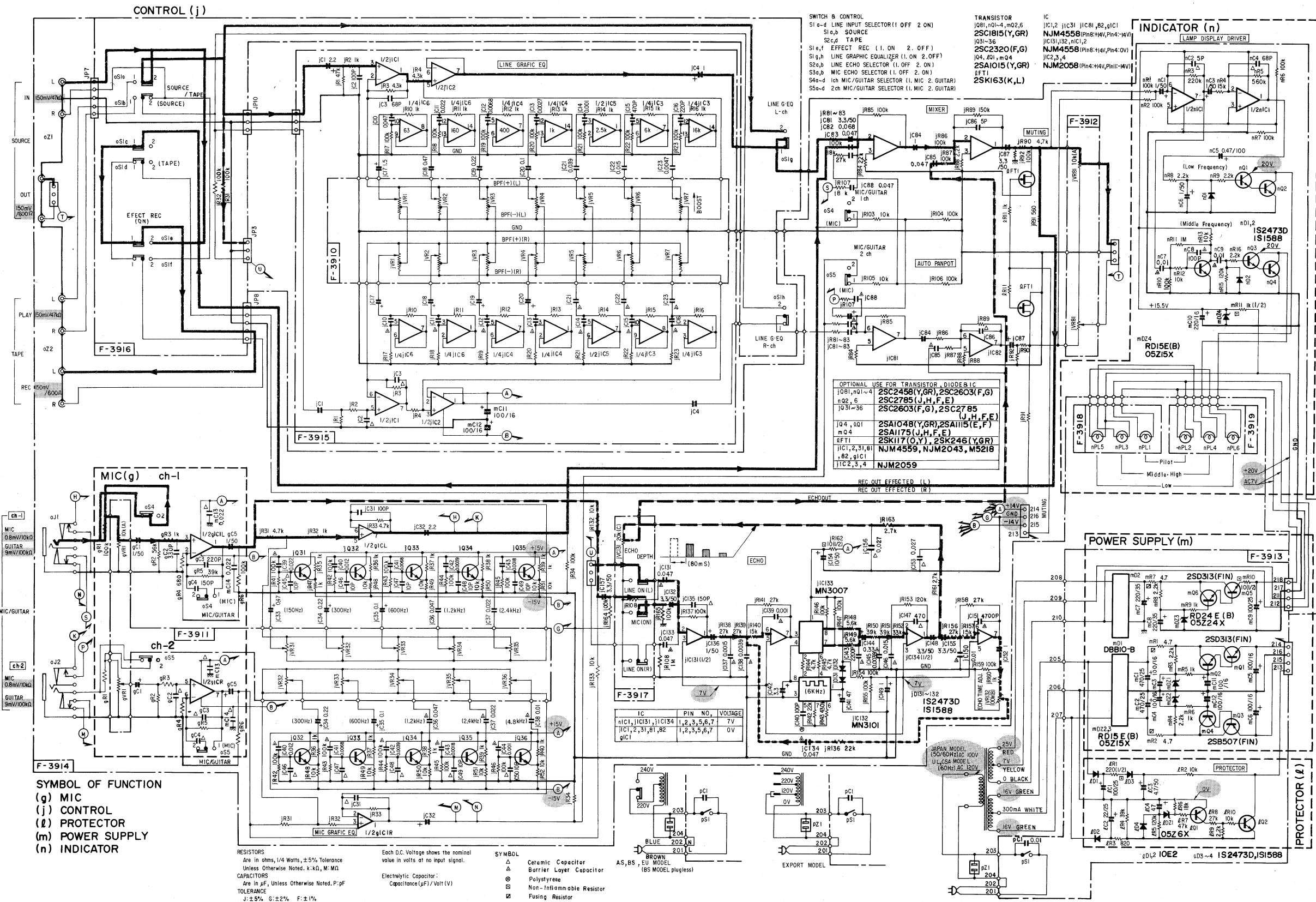


### • MN3101 <BBD Clock Driver>



# 6. SCHEMATIC DIAGRAM

\*Design and specifications subject to change without notice for improvement.  
\*La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.  
\*Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



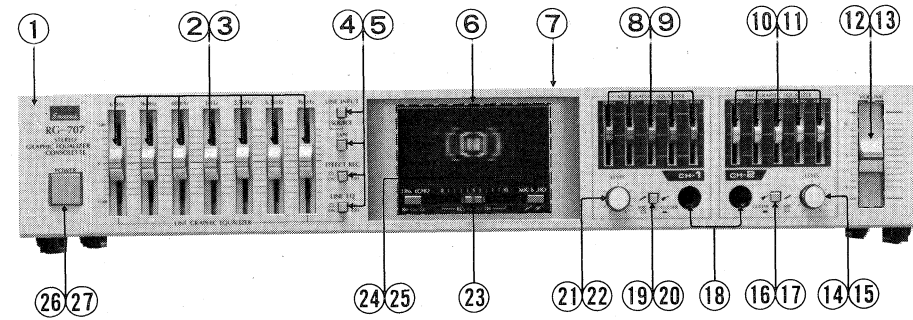
- 2SA1015
- 2SA1048
- 2SC1815
- 2SC2320
- 2SC2458
- 2SK246
- 2SK117
- 2SK163
- 2SB507
- 2SD313
- 2SC2603
- MN3101
- MN3107
- NJM4558D
- DBB10-B
- 1S1588
- 1S2473
- 10E-2
- 05Z15-2
- 05Z24-V
- 05Z6.2-V
- RD15E-B

1  
2  
3  
4  
5

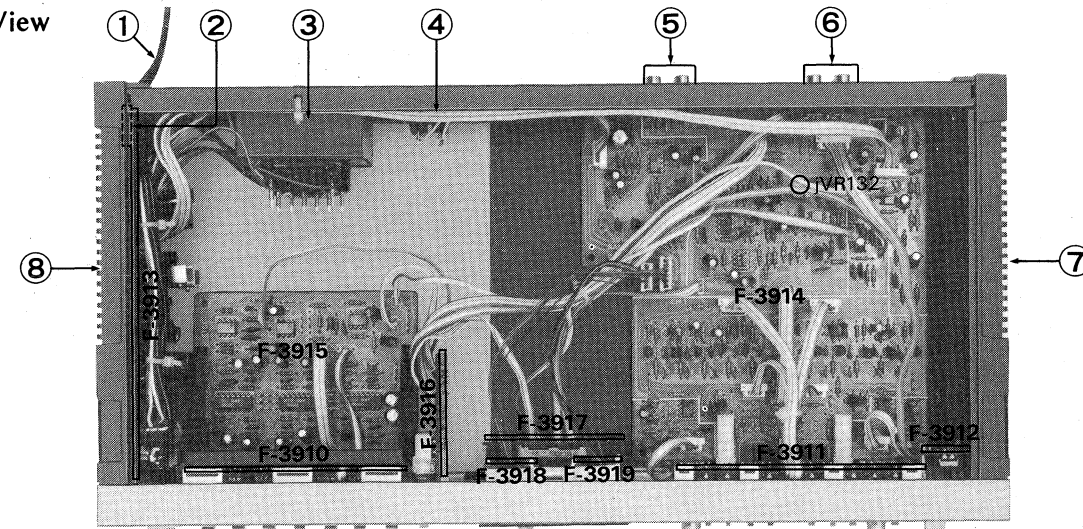


## 7. OTHER PARTS

### 7-1. Front View



### 7-2. Top View



#### Parts List <Front View>

Parts No.	Stock No.	Description
1	47111500	Front Panel Ass'y <Silver Model>
	47111600	Front Panel Ass'y <Black Model>
2	07777700	Slide Knob, LINE GRAPHIC EQUALIZER <Silver Model>
	07767000	Slide Knob, LINE GRAPHIC EQUALIZER <Black Model>
3	46500600	250k $\Omega$ x 2 Slide V.R., LINE GRAPHIC EQUALIZER
4	07917200	Push Knob, LINE INPUT-EFFECT REC. LINE EQ <Silver Model>
	07917300	Push Knob, LINE INPUT-EFFECT REC. LINE EQ <Black Model>
5	46500100	Push SW., LINE INPUT-EFFECT REC. LINE EQ
6	47116600	Sound Display Ass'y (with Slide Knob, ECHO DEPTH) <Silver Model>
	47116700	Sound Display Ass'y (with Slide Knob, ECHO DEPTH) <Black Model>
7	07962200	Bonnet
8	47115900	Slide Knob, CH-1 MIC GRAPHIC EQUALIZER (Blue)
9	46500500	50k $\Omega$ (B) Slide V.R., CH-1 MIC GRAPHIC EQUALIZER
10	47116000	Slide Knob, CH-2 MIC GRAPHIC EQUALIZER (Orange)
11	46500500	50k $\Omega$ (B) Slide V.R., CH-2 MIC GRAPHIC EQUALIZER
12	47115700	Slide Knob Ass'y (with Masking Plate), VOLUME <Silver Model>
	47115800	Slide Knob Ass'y (with Masking Plate), VOLUME <Black Model>
13	46500300	10k $\Omega$ (A) Slide V.R., VOLUME
14	47109800	Knob, CH-2 MIC LEVEL <Silver Model>
	47109900	Knob, CH-2 MIC LEVEL <Black Model>
15	46500200	10k $\Omega$ (A) V.R., CH-2 MIC LEVEL

Parts No.	Stock No.	Description
16	07917200	Push Knob, CH-2 MIC/GUITAR <Silver Model>
	07917300	Push Knob, CH-2 MIC/GUITAR <Black Model>
17	46501800	Push SW., CH-2 MIC/GUITAR
18	24306200	Mic Jack
19	07917200	Push Knob, CH-1 MIC/GUITAR <Silver Model>
	07917300	Push Knob, CH-1 MIC/GUITAR <Black Model>
20	46501800	Push SW., CH-1 MIC/GUITAR
21	47109800	Knob, CH-1 MIC LEVEL <Silver Model>
	47109900	Knob, CH-1 MIC LEVEL <Black Model>
22	46500200	10k $\Omega$ (A) V.R., CH-1 MIC LEVEL
23	46500400	20k $\Omega$ (C) Slide V.R., ECHO DEPTH
24	47110400	Push Knob, LINE ECHO-MIC ECHO
25	46500000	Push SW., LINE ECHO-MIC ECHO
26	07971210	Push Knob, POWER <Silver Model>
	07971210	Push Knob, POWER <Black Model>
27	07265300	Push SW., POWER

#### Parts List <Top View>

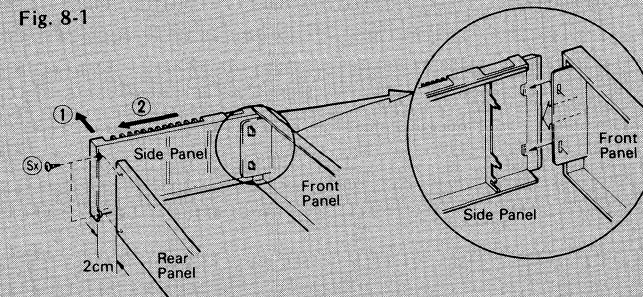
Parts No.	Stock No.	Description
1	38004700	Power Supply Cord
2	07917700	Power Supply Cord Cover
3	15010401	Power Transformer
4	46364900	AC Outlet
5	46371500	4P Terminal Board, TAPE
6	46371500	4P Terminal Board, LINE
7	07965500	Side Panel (Right)
8	07965400	Side Panel (Left)

## 8. MAIN PARTS REPLACEMENT

### A. Side Panel L (R)

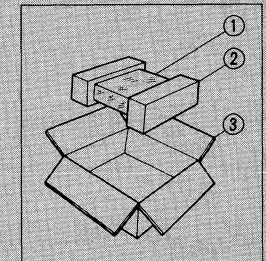
- 1) Remove four screws (Sx) fixing side panel L (R) from rear panel side.
- 2) Remove bonnet and bottom plate.
- 3) Shift the position of the side panel L (R) 2 cm in the arrow direction 1 and then pull it the arrow direction 2 to remove the side panel L (R). (See Fig. 8-1)

Fig. 8-1



## 9. PACKING LIST

Parts No.	Stock No.	Description
1	07599500	Vinyl Cover
2	07965300	Styrofoam Packing
3	47116200	Carton Case <Silver Model>
	47116300	Carton Case <Black Model>



## 10. ACCESSORY LIST

Stock No.	Description
46431100	Operating Instruction
38103300	PJP Cord

**Sansui**

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(SM1-80)

Printed in Japan (130030M) <Stock No. 36475300>